

VULTURE
Questions and Answers
Dated August 23, 2007

Please submit VULTURE program related questions to
BAA07-51@darpa.mil
Items in yellow are newly submitted questions.

Mission and Technical Requirements:

- 1) Does the 99% probability of station keeping include redeployment time of the Vulture System from one area of interest to another?

Answer: No, the 99% probability envisions just one area of deployment. The probability is calculated only when the mission is in one area of interest and would start again once another area of interest is reached.

Proposal:

- 1) The items in blue are directly from the solicitation starting on page 19.

This section describes the level 3 WBS as viewed by the Government. This is an initial framework and is not intended to be all-inclusive. The offeror's WBS shall be consistent with the Government's WBS to level 2. However the offeror shall tailor and augment this WBS at level 3 and below as appropriate for their proposed system. The offeror's WBS, SOW, IMS and cost proposal must be consistent at all levels. Proposals must define Phase I work through at least level 4. Phase II and III work may be defined at level 2 in the Phase I proposal.

Outline Level

Code 1 2 3 4

0.0 Vulture Program

1.0 Systems Engineering

1.1 Military Utility Modeling and Simulation

1.2 Requirements Development

1.3 Reliability and Mission Success Analysis

1.4 Configuration Management

1.5 Risk Management

1.6 Security

1.7 Software

1.8 System Demonstration Planning

2.0 Mission Management and Control

2.1 Subsystem engineering

2.2 Physical Infrastructure

2.2.1 Control Station

- 2.3 Software
 - 2.3.1 Processing Architecture
 - 2.3.2 Software Architecture
- 2.4 Mission Planning
 - 2.4.1 Launch & Recovery
 - 2.4.2 Flight Planning
 - 2.4.3 Systems Management
- 2.5 Air Vehicle Management
 - 2.5.1 Autonomous Flight
 - 2.5.2 Flight Termination
- 2.6 Contingency Management
- 2.7 Human-Machine Interface
 - 2.7.1 Mission Control Interface
 - 2.7.2 Situation Awareness
- 2.8 Communications
 - 2.8.1 Vehicle
 - 2.8.2 Internal
 - 2.8.3 External
- 2.9 Mission Control Segment Integration & Test
- 3.0 Air Vehicle
 - 3.1 Airframe
 - 3.1.1 Performance and Flight Characteristics
 - 3.1.2 Takeoff and Landing
 - 3.1.3 Operating Environment
 - 3.1.4 Air Worthiness
 - 3.1.5 Structures, Materials and Processes
 - 3.1.6 Control Effectors (if applicable)
 - 3.1.7 Nacelles, Inlets, Exhaust Ducts (if applicable)
 - 3.1.8 Apertures
 - 3.2 Propulsion
 - 3.2.1 Engine
 - 3.3 Vehicle Management System
 - 3.3.1 Flight Controls
 - 3.3.2 Navigation
 - 3.3.3 System Health
 - 3.3.4 Contingency Management
 - 3.4 Mission Management System Hardware
 - 3.5 Communications
 - 3.5.1 Narrowband
 - 3.5.2 Wideband
 - 3.5.3 Relay
 - 3.5.4 Air Traffic Services
 - 3.5.5 Antennae
 - 3.5.6 LPI/LPD/COMSEC Architecture (if applicable)
 - 3.6 Subsystems
 - 3.6.1 Air Data System

- 3.6.2 Environment Control
- 3.6.3 Fuel (if applicable)
- 3.6.4 Power Distribution
- 3.7 Payload
 - 3.7.1 Sensors
- 3.8 Air Vehicle Segment Integration and Test
- 4.0 Supportability
- 4.1 Reliability and Maintainability
- 4.2 Maintenance Planning
- 4.3 Deployability
- 4.4 Support Equipment
- 4.5 Manpower, Personnel & Training
- 4.6 Supply Support
- 4.7 Computers
- 4.8 Safety & Health Hazards
- 4.9 Segment Integration and Test
- 5.0 System Integration and Test
- 5.1 Test Planning
- 5.2 Quality Assurance
- 5.3 Flight Test Support
- 5.4 Demonstrations
- 5.5 System Software
- 6.0 Program Management

The above structure contains 83 individual WBS Line Items. The Government response has specifically asked the Contractors to generate an additional level (WBS 4) of WBS line items. Assuming the above as a "straw man" and adding Level 4 Breakouts at the identified Level 3 WBS would result in an additional 37 Level 4 WBS's. This would mean that we have 120 WBS Line items utilizing the above WBS.

Additionally from the solicitation (page 26) the following cost volume instruction are noted: Supporting cost and pricing information shall be provided in the offeror's format. This supporting information must have sufficient detail to substantiate the summary cost tables. Is it correct to interpret that this will mean that supporting Monthly Price Breakdowns (in contractor format) will be required?

A 12 month period of performance requiring monthly price breakdowns will result in approximately 4 to 6 pages of Price Breakdowns per WBS. Running this out to Level 4 will result in 120 Price Breakdowns. This will mean that an offeror will be submitting between 480 - 720 pages of price breakdowns alone without any other supporting documentation for the cost volume. Is this the DARPA evaluators intent for a Phase 1 Competitive Trade Study?

Answer: DARPA has defined the WBS basic structure in an effort to establish a common framework to be used throughout the program. As stated in the BAA, this WBS may be tailored at WBS Level 3 and below. DARPA is interested in seeing the offeror's tailored WBS to Level 4. While this Level 4 WBS will have a large number of line items, obviously the majority of these will not be used in Phase I. The offeror only needs to provide SOW, IMS and cost detail

for those elements that will have work against them in Phase I. The cost table appendix located at http://www.darpa.mil/tto/solicit/BAA07-51/Cost_Tables_v2.doc provides instructions for providing summary cost information.

2) Bottom paragraph page 19 of the solicitation.

A complete proposal shall consist of two volumes-a Technical Proposal (Volume I) and a Cost Proposal (Volume II). Offerors shall submit a total of nine (9) copies of Volume I and nine (9) copies of Volume II in hardcopy as well as two (2) copies of each proposal in electronic format to DARPA. All graphics and tables, as well as the offeror's IMS in MS Project format, shall be included in separate electronic files on the CDs. Respondents need only submit one (1) original signed proposal along with the copies. Each submittal shall reference BAA 07-51. The technical volume may include an attached bibliography of relevant technical papers or research notes (published and unpublished), which document the technical ideas and approach upon which the proposal is based. Copies of not more than three (3) relevant papers can be included with the submission. The bibliography and attached papers (in Section VII of Volume I) are not included in the page counts given below. The submission of other supporting materials along with the proposal is strongly discouraged and will not be considered for review. **Sections I-IV of Volume I shall not exceed fifty (50) pages total**, excluding the offeror's statement of work and integrated master schedule. The page limitation for proposals includes all figures, tables (except the table of contents and front matter), and charts. All pages that exceed the maximum page limit specified will be removed and not be reviewed or considered in the evaluation. The Cost Proposal Volume does not have a page limit.

However, there are seven sections called for in the technical volume (with Section VII not in the page allocation) and sections V and VI do not have a page count identified. Therefore the question: Is the bold section above a typo that should have been: Sections I-VI of Volume I shall not exceed fifty (50) pages total?

Answer: Yes, this was a typo. Sections I-VI shall not exceed fifty pages total.

3) Please provide confirmation that in Section I. Administrative of the technical volume that the cover page and official transmittal letter are or are not included in the 50 page limit.

Answer: The cover page and transmittal letter are not included in the 50 page limit.

4) Are embedded video files permissible under the Proposal Format?

Answer: No

5) Page 20 of the solicitation identifies the WBS framework to be used tie all program elements together. A portion of the WBS specified by the solicitation is reproduced below through Mission Management and Control.

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 - 1.1 Military Utility Modeling and Simulation
 - 1.2 Requirements Development
 - 1.3 Reliability and Mission Success Analysis
 - 1.4 Configuration Management
 - 1.5 Risk Management
 - 1.6 Security
 - 1.7 Software
 - 1.8 System Demonstration Planning
 - 2.0 Mission Management and Control
 - 2.1 Subsystem engineering
 - 2.2 Physical Infrastructure
 - 2.2.1 Control Station
 - 2.3 Software
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 - 2.8.1 Vehicle
 - 2.8.2 Internal
 - 2.8.3 External
 - 2.9 Mission Control Segment Integration & Test

This listing suggests Systems Engineering, Mission Management and Control, Air Vehicle, Supportability, System Integration & Test, and Program Management are all at Level 1 within the WBS structure equal to the Vulture program. A conventional approach would place these WBS elements at level 2 as shown below.

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The only difference between this version and that provided in the solicitation version is that Systems Engineering, MM&C, AV, Support, and System Integration, Program Management, and all lower level elements have been indented one level to the right.

Question: Is this interpretation consistent with the intent of the solicitation?

Answer: The WBS format prescribed by the Government meets our intent. For example, the Government intends to have insight into the work packages, schedule and cost performance one level below 2.2.1 Control Station. The proposed response does not address the Governments' intent.

6) Can government labs propose as prime contractors?

Answer: Typically government labs do not act as prime contractors for government efforts through a traditional contractual relationship with another government entity; however, each lab has its own charter and would need to determine if they can propose as a prime. The lab must provide documentation that 1) applicable regulations allow its participation; 2) it has a unique capacity to do the work; 3) the work isn't otherwise available in the private sector; and 4) the lab is not directly competing with industry. Citing FAR exceptions or other regulations allowing its response to the solicitation would be ideal.

7) Can you provide a definition of what DARPA means by Point of Departure?

Answer: The Government intends the contractor to develop an initial conceptual design which closes around the DARPA non-tradeable requirements and is substantiated via first order analysis. This design is the starting point for the trades which will be done in Phase 1. The Government does not expect initial concept design to be mature; that is the primary output of Phase 1.

8) Under paragraph VI-B-8 it is stated that an offeror with subcontractors "is required to submit a subcontracting plan in accordance with FAR 19.702(a) (1) and (2)". We are a certified disadvantaged small business and for this reason we feel that FAR 19.702(b) may apply to us instead.

Do we need to submit a subcontracting plan?

Answer: Small businesses do not need to submit a subcontracting plan.

9) The BAA (page 18) states that the proposal summary should be no more than 3 pages, including cover page.

Could you please clarify whether this means:

- a) 3 page summary plus a cover page? Or
- b) 2 page summary plus a cover page?

Answer: 3 page summary plus a cover page.

10) The only publicized Vulture budget numbers that we can find are \$3.7M for FY 08 and \$4.2M for FY09 in the RDT&E Budget Justification Sheet(see attachment).

<<Funding.pdf>>

DARPA's stated intent in the BAA is to make multiple awards for Phase 1.

The scope of work requested in the BAA for Phase 1, over the expected period of performance of 12 months, appears to be well in excess of DARPA's ability to fund multiple awards with this publicized budget.

Should we assume that DARPA is planning on obtaining the additional budget required to fund the scope of work in the BAA for multiple Phase 1 winners, or is DARPA looking for tasking that matches multiple awards based on the publicized budget?

Answer: DARPA reserves the right to make none, one or multiple awards and will identify resources to support any awards made. No program cost target was provided to proposers, and none should be inferred from other sources.

11) Can the 3 page proposal summary be hand delivered or does it have to be mailed - see page 27 of BAA?

Does submitted mean just delivered to DARPA address or does it mean it must be mailed?

Answer: For the three page proposal summary either by hand or via mail will work for a method of delivery.

Teaming:

1) Will the Government entertain FFRDCs teaming with contractor?

Answer: Barring any exclusions from the FFRDCs charter, applicable laws or regulations, DARPA would allow teaming between contractors and an FFRDC. As the charter for each FFRDC is different the best source for an answer would be the specific FFRDC with whom you are intending to team. The prime and/or FFRDC must provide documentation that 1) the FFRDC's sponsoring agreement and applicable regulations allow its participation; 2) the FFRDC has unique capacity to do the work; 3) the work isn't otherwise available in the private sector; and 4) the FFRDC is not directly competing with industry. Citing FAR exceptions or other regulations allowing its response to the solicitation would be ideal. Note the prime is responsible to pay the FFRDC as a sub and DARPA will not fund the FFRDC directly.